

## 5.19 HAZARDOUS WASTE IMPACTS

### 5.19.1 Background

Hazardous waste and problems associated with the improper disposal of hazardous materials has received much attention in recent years. The *Resource Conservation and Recovery Act of 1976 (RCRA)* established the regulations for hazardous waste and related activities that include hazardous waste generators, transporters, treatment, storage and disposal facilities. The existence of hazardous materials on either existing airport property or any property that would be acquired to accomplish the Proposed Action will be examined. Where property is contaminated by hazardous waste, it will be determined whether the hazardous materials will be disturbed or require removal.

### 5.19.2 Methodology

The following activities were conducted as a part of a Phase I Environmental Site Assessment (ESA) process to determine if contamination may have occurred in the primary area of interest, identified in **Exhibit 4-1**:

- Determined the historical and present existence of storage tanks (above-ground or underground) including their location, size, age, use, and condition;
- Investigated the potential for contamination based on past and present uses of the Site including pesticides, road salt, solvents, anti-freezes, paints, oils, greases, fuels, etc.;
- Investigated the presence, location and ownership of polychlorinated biphenyl (PCB)-containing or contaminated equipment, such as electrical transformers, capacitors, etc., and determined if the equipment was leaking or showed visual signs of past leakage;
- Conducted an off-site field observation of the site for existing or potential contamination or environmentally related damage, such as stained soils, stressed vegetation, etc.;
- Determined the potential existence of wetlands, surface water and flood zones on the site;
- Identified past and present use of the Site and adjacent sites;
- Reviewed environmental characteristics of the site from 1940 to the present;
- Provided verbal and written communication with Federal and state environmental agencies to determine if any problems with hazardous substances were documented for the site;
- Reviewed available information on the geologic and hydrogeologic profile of the site; and
- Reviewed aerial photographs from three different periods.<sup>1</sup>

---

<sup>1</sup> Gary/Chicago Airport Authority, prepared by Clean World Engineering, Ltd. *Draft Phase I Environmental Site Assessment of Properties Located within the Runway Extension Zone Northwest of Gary/Chicago Airport, Gary, Indiana*. November 2002. Gary/Chicago Airport Authority, prepared by Clean World Engineering, Ltd. *Draft Phase I Environmental Site Assessment of Properties Located within the Runway Protection Zone Southeast of Gary/Chicago Airport, Gary, Indiana*. October 2002.

Where the Phase I process identified recognized environmental conditions (RECs), a Phase II ESA was conducted of the appropriate area(s). The Phase II ESA was performed in accordance with American Society for Testing and Materials (ASTM) guidelines and Indiana Department of Environmental Management (IDEM) Risk Integrated System of Closure (RISC) technical guidelines for soil screening procedures.

Further Phase III subsurface investigation of the appropriate areas was also conducted to determine the extent of groundwater contamination and to assist in the development of a Remedial Action Plan. Based upon these testing procedures, a clean-up strategy has been identified as a part of this EIS.

Because the Proposed Action is to occur within the Indiana Lake Michigan Coastal Program (LMCP) area, the applicable summary matrix of laws and guidance documents for this environmental category has been reviewed to confirm that all state and local regulations have been considered in this EIS. The matrix on Pollution Prevention, Recycling, Reuse, and Waste Management issues can be found in **Appendix C** for reference. Matrix 5-8 Cross-reference of Pollution Prevention, Recycling, Reuse, and Waste Management Laws and Guidance Documents has been reviewed by the consulting team to confirm that all the identified items have been considered in the evaluation of the hazard waste impacts as described in this section.

### **5.19.3 Existing Conditions – 2000**

In section 4.5 of the last chapter, two sites in the study area were identified that are currently undergoing cleanup activity. The only area on the airport property that is undergoing cleanup for hazardous materials is an area referred to as the “Conservation Chemical Company Site.” As overviewed in the last chapter, surface cleanup actions began in July 1999 and were completed by December 2001. Because there remains on the site a pool of approximately 250,000 gallons of liquid hydrocarbon free product above the water table, U.S. EPA Region 5 installed five extraction wells in late 2002 to remove this free product.

Another existing cleanup activity that transits the airport property relates to the Midco II superfund site located adjacent to the airport, where groundwater extraction, treatment and deep well injection is currently ongoing and expected to continue for 30 years (beginning in 1996). An underground pipeline, which parallels the EJ&E Railway was constructed to join the Midco II site to the Midco I site, where the injection well is located.

### **5.19.4 Future Conditions – 2007**

#### **5.19.4.1 No Action**

Under the no-action scenario, the Proposed Action will not occur and the existing runway continues under status quo conditions. The cleanup activities underway at the Conservation

Chemical Company site and Midco II will continue under the supervision of the U.S. EPA. Other areas that are contaminated (identified below) will only be cleaned up if the private owners take action.

#### **5.19.4.2 Improvements to Existing Runway 12-30 to Conform to FAA Standards**

Under the Proposed Action, improvements associated with the areas northwest of the existing runway would occur. These improvements include acquiring approximately 180 acres of land located northwest of the existing runway held by four landowners, including the area that encompasses the Asphalt Wetland, and relocating the EJ&E Railway. In addition, another 20 acres of land acquisition southeast of the runway in the Runway Protection Area is proposed to occur as funding and availability allow. This 20-acre area is held by 61 landowners and includes 42 homes.

Phase I ESA procedures were followed to assess the environmental condition of both of these areas. The findings are summarized below. Further Phase II and Phase III ESA procedures were conducted for a large part of the land to be acquired to the northwest of the runway.

In order to meet the runway safety area requirements, land acquisition and the railway relocation will occur and the runway will be extended approximately 546 feet to the northwest. Five issues relating to the disturbance of hazardous materials will be of concern during these improvements:

- The Conservation Chemical Company cleanup may require that some of the extraction wells be recessed and capped so that the area where the runway is lengthened or the clear areas beyond the new end of runway will meet FAA standards.
- The pipeline associated with the Midco II site cleanup that transits the area off the end of the existing runway may need to be encased and possibly lowered to allow for the extension of the runway as required to conform to FAA standards.
- The soil where the construction activities will occur for the runway and for FAA equipment installation off the end of the runway is contaminated. Although the contamination levels do not exceed the industrial activity standards, some of the soil will be disturbed during the construction of the runway improvements. Other areas where FAA personnel will be installing and maintaining navigational equipment should be cleaned to meet residential standards.
- The area known as the Asphalt Wetland is contaminated with still bottoms/tank bottoms. The hazardous waste in this area needs to be removed from the surface. This cleanup will eliminate contaminated surface runoff from the site area.
- The groundwater in this same area is contaminated. Recommendations are presented below to limit any outfall of contaminated groundwater into the adjacent river.

In addition to the project area issues, historic and hazardous material assessments will be conducted of the potential wetland mitigation locations as needed to meet regulatory guidance in determining if there would be any potential significant negative impacts associated with that mitigation location.

#### **5.19.4.3 Improvements to Provide Additional Runway Length on Runway 12-30**

The improvements to provide additional runway length on Runway 12-30 are to occur simultaneously with and require accomplishment of the improvements for Runway 12-30 to conform to FAA standards (safety area improvements). An approximately 1,354-foot extension to the northwest on Runway 12 is proposed in conjunction with the approximately 546-foot extension to Runway 12 to provide safety areas conforming to FAA standards (total extension 1,900 feet). Because the land located northwest of the existing runway is in large parcels with few landowners, the additional extension of the runway requires the acquisition of only an additional 10 acres held by one landowner. The most onerous cleanup requirements will need to be addressed due to the runway improvements associated with conforming to the FAA standards.

#### **5.19.4.4 Expansion of Existing Terminal**

The area where the terminal facility expansion is to occur is not expected to contain hazardous materials. A Phase I ESA was conducted for the existing airport property and no cleanup requirements were identified in the existing terminal area or at adjacent sites.<sup>2</sup>

#### **5.19.4.5 Acquisition and/or Reservation of Sites for Future Passenger Terminal and Air Cargo Facilities**

Two sites have been identified to be acquired and reserved for potential future aviation-related activities, including the development of a potential future passenger terminal and new cargo facilities. The site for the potential new cargo facility is a remnant parcel from the land acquisition requirements for the runway improvements. An additional 25 acres of land acquisition, held by six landowners, is associated with the assembling of land for the potential long-term passenger terminal area. Access to some of these parcels was not available during the writing of this report. The Phase I ESA was conducted from public right-of-way, and the parcels were viewed when access was given to the railway corridor, which provided a good view of some areas that could not have been otherwise seen from the roadways. Based upon this limited review, there will be some cleanup requirements anticipated to be associated with these additional parcels, many of which are actively used for industrial purposes or which have been used in the past for industrial and transportation activities.

---

<sup>2</sup> Gary/Chicago Airport Authority, prepared by R. W. Armstrong & Associates. *Gary Regional Airport Master Plan Update*. 1991.

## 5.19.5 Summary of Findings

### 5.19.5.1 Phase I ESA for Northwest Acquisition Area

The Phase I ESA revealed recognized environmental conditions (RECs) in the northwest acquisition area in connection with the following properties:

- OSI Environmental (former Solar Environmental, Inc.), 6980 Chicago Avenue (bulk used oil handling facility): The presence of a used oil above-ground storage tank (AST) and stains around the risers could be a potential REC. Due to limited off-site field observation, it cannot be conclusively stated that hazardous waste or materials are not present on the property.<sup>3</sup>
- 6917 West Industrial Highway (abandoned property): The presence of a fuel dispenser and 55-gallon drums with unknown contents are an indication of possible RECs. Due to limited off-site field observation, it cannot be conclusively stated that hazardous waste or materials are not present on the property.<sup>4</sup>
- PI&I Motor Express (Kerola Enterprises, Inc.), 7000 Chicago Avenue, (trucking terminal and maintenance facility): Operations including degreasing fueling, rust removal, auto bodywork, paint removal, installation of lead-acid batteries, and oil and fluid replacement may indicate the presence of hazardous materials or waste. Due to limited off-site field observation, it cannot be conclusively stated that hazardous waste or materials are not present on the property.<sup>5</sup>
- Riechmann Enterprises, Inc., 7200 Chicago Avenue (truck dispatching facility): According to the Indiana Department of Environmental Management (IDEM), a leaking underground storage tank (LUST) incident is still active.<sup>6</sup>
- PGT Trucking, 7212 Chicago Avenue (trucking terminal and maintenance facility): Stains and spills observed around 55-gallon drums containing used oil and mineral spirits may indicate a potential REC. Further, there is a oil/water separator on the site, the condition of which is unknown. Further investigation is required to determine the subsurface condition of the property.<sup>7</sup>
- Truck City of Gary, Inc./Gary White Sales and Service, Inc., 7360 Chicago Avenue (trucking terminal, auto body shop, painting, tractor servicing and maintenance facility): Facility operations including degreasing, rust removal, auto body work, paint preparation, spray booth operations, paint removal, installation of lead-acid batteries, oil and fluid replacement may indicate the presence of hazardous materials or waste. Due to limited

---

<sup>3</sup> Clean World Engineering, *Draft Phase I Environmental Site Assessment*, November 2002.

<sup>4</sup> Clean World Engineering, *Draft Phase I Environmental Site Assessment*, November 2002.

<sup>5</sup> Clean World Engineering, *Draft Phase I Environmental Site Assessment*, November 2002.

<sup>6</sup> Clean World Engineering, *Draft Phase I Environmental Site Assessment*, November 2002.

<sup>7</sup> Clean World Engineering, *Draft Phase I Environmental Site Assessment*, November 2002.

off-site field observation, it cannot be conclusively stated that hazardous waste or materials are not present on the property.<sup>8</sup>

- Fuelex, Inc. (Calumet Flexicore Corp.), 7780 Chicago Avenue (industrial warehouse): Storage of heavy construction equipment and vehicles could be a potential REC if the equipment and vehicles are not properly maintained and result in leakage of automotive fluids. Due to limited off-site field observation, it cannot be conclusively stated that hazardous waste or materials are not present on the property.<sup>9</sup>
- Western Scrap Corporation, 6901 Chicago Avenue (active auto salvage yard): Dismantling and crushing of vehicles; drainage and transferring vehicle fluids; vehicles and equipment maintenance; parts cleaning (solvent and water); and storage of fluids, used parts, solid wastes, scrap parts, and wrecked vehicles are activities which indicate the presence of hazardous materials and/or wastes. Due to limited off-site field observation, it cannot be conclusively stated that hazardous waste or materials are not present on the property.<sup>10</sup>
- LWD Land Company, 6901 Chicago Avenue (office building): Due to limited off-site field observation, it cannot be conclusively stated that hazardous waste or materials are not present on the property.<sup>11</sup>
- SES Construction and Industrial Equipment, 6915 Chicago Avenue (construction equipment rental and storage facility): Vehicle maintenance and equipment repair (degreasing, equipment cleaning, rust removal, painting, paint removal, spray booth operation, and brush cleaning) may indicate the presence of hazardous materials or wastes. Due to limited off-site field observation, it cannot be conclusively stated that hazardous waste or materials are not present on the property.<sup>12</sup>
- Beemsterboer Slag Ballast Company, 7501 Chicago Avenue (former slag crushing plant): The presence of an UST on the ground surface is a possible REC. Further investigation is required to determine the subsurface condition of this property.<sup>13</sup>
- Amerigas Propane LP, 7545 Chicago Avenue former propane gas storage and dispensing facility): The presence of spills and stains around the propane ASTs may be an indication of an REC. The presence of oil pipeline remnants used by City Services Oil Company may also be a potential REC. Further investigation is required to determine the subsurface condition of this property.<sup>14</sup>
- Northwest Indiana Water Department, 7405 Chicago Avenue (water pumping station).

---

<sup>8</sup> Clean World Engineering, *Draft Phase I Environmental Site Assessment*, November 2002.

<sup>9</sup> Clean World Engineering, *Draft Phase I Environmental Site Assessment*, November 2002.

<sup>10</sup> Clean World Engineering, *Draft Phase I Environmental Site Assessment*, November 2002.

<sup>11</sup> Clean World Engineering, *Draft Phase I Environmental Site Assessment*, November 2002.

<sup>12</sup> Clean World Engineering, *Draft Phase I Environmental Site Assessment*, November 2002.

<sup>13</sup> Clean World Engineering, *Draft Phase I Environmental Site Assessment*, November 2002.

<sup>14</sup> Clean World Engineering, *Draft Phase I Environmental Site Assessment*, November 2002.

- Connell Ltd, 7001 Chicago Avenue (former Luria Brothers and Company Inc), 6633 Industrial Highway, (mill scale de-oiling facility): IDEM files indicate that the facility has completed closure activities. However, IDEM has not completed their review enabling them to issue a No Further Action (NFA) letter. In addition, due to limited off-site field observation, it cannot be conclusively stated that hazardous waste or materials are not present on the property.<sup>15</sup>
- Go-Tane Service Stations, Inc. – 6415 Industrial Highway: Underground storage tanks (USTs) were removed from property in 1989. It is unknown if the USTs were leaking. However, no NFA letter was found in the records. Therefore, further investigation is required to determine the subsurface condition of this property.<sup>16</sup>
- Conservation Chemical Company, 6500 Industrial Highway (abandoned chemical recycling facility (currently owned by the airport ): cleanup in process.
- EJ&E Railway right-of-way between Industrial Highway and Gary Avenue: This ESA did not reveal any RECs on the property; however, surface soil sampling is recommended due to the past and current usage of the railroad right-of-way.<sup>17</sup>
- NBD Bank Trust Property, 7201 Chicago Avenue and 5510 and 4900 Morse Streets (122-acre vacant land east of Cline Avenue and north of Gary Avenue): Dumped oil sludge/tank bottoms and drums on the property are RECs. Further investigation is required to determine the subsurface condition of this property.<sup>18</sup>

Phase II ESAs should be conducted on each of these properties. In order to conduct the Phase II investigation, site access is required. Of the parcels initially impacted by the Proposed Action, site access was only granted to the NBD Bank Trust Property, located at 7201 Chicago Avenue and 5510 and 4900 Morse Streets (a 122-acre vacant land east of Cline Avenue and north of Gary Avenue).<sup>19</sup> It was subsequently recommended that a Phase II ESA be conducted at the NBD Bank Trust Property.

---

<sup>15</sup> Clean World Engineering, *Draft Phase I Environmental Site Assessment*, November 2002.

<sup>16</sup> Clean World Engineering, *Draft Phase I Environmental Site Assessment*, November 2002.

<sup>17</sup> Clean World Engineering, *Draft Phase I Environmental Site Assessment*, November 2002.

<sup>18</sup> Clean World Engineering, *Draft Phase I Environmental Site Assessment*, November 2002.

<sup>19</sup> Gary/Chicago Airport Authority, prepared by Clean World Engineering, Ltd. *Draft Phase I Environmental Site Assessment of Properties Located within the Runway Extension Zone Northwest of Gary/Chicago Airport, Gary, Indiana*. November 2002.

#### 5.19.5.2 Phase II ESA for NBD Bank Site (Northwest Acquisition Area)

The NBD Bank Trust Property where the Phase II/III ESA was conducted is shown in **Exhibit 5.19-1**. The NBD Bank Trust Property includes three parcels bounded to the north by Amerigas Propane LP (former gas distribution terminal) and Beemsterboer Slag Ballast Company (former slag crushing plant), followed by Chicago Avenue; to the south by EJ&E Railway followed by Gary Avenue; to the east by conservation Chemical Company (a former chemical recycling facility) and the EJ&E Railway followed by the Gary/Chicago International Airport; and to the west by Cline Avenue. Western Scrap Corporation, an auto salvage yard is located northeast of the site area.<sup>20</sup> The NBD Bank Trust Property was previously owned by City Services Oil Company and has never been developed. Currently, there are no permanent structures on the NBD Bank Trust Property. There are two gravel/dirt roads and on the western portion of the NBD Bank Trust Property there is parking area covered with crushed stones/dirt. An overhead power line transects the NBD Bank Trust Property on the western portion of the property. No other utility infrastructure exists on the NBD Bank Trust Property. The property was suspected to have received tank bottoms/oil sludge in the past from unknown sources. Various attempts were made by the present owner to aerate these materials in the soil employing land-farming techniques. The soil and groundwater at the NBD Bank Trust Property also had the potential to have been impacted by the adjoining conservation Chemical Company property.<sup>21</sup>

The Phase II ESA was conducted in October 2002 to confirm the presence or absence of contamination and to provide a subsurface assessment of the NBD Bank Trust Property for RECs identified in the Phase I ESA including:

- Impact on soil and groundwater at the NBD Bank Trust Property as a result of suspected tank bottoms dumped on the ground surface.
- Potential impact on the soil and groundwater at the NBD Bank Trust Property by the former usage of the adjoining Conservation Chemical Company property.


During the October 2002 investigation, eight soil borings (SB-1 through SB-8 on **Exhibit 5.19-2**) were installed using a hollow stem auger until groundwater was encountered. Continuous sampling was performed at 2-foot intervals with a split-spoon sampler. Surface and subsurface

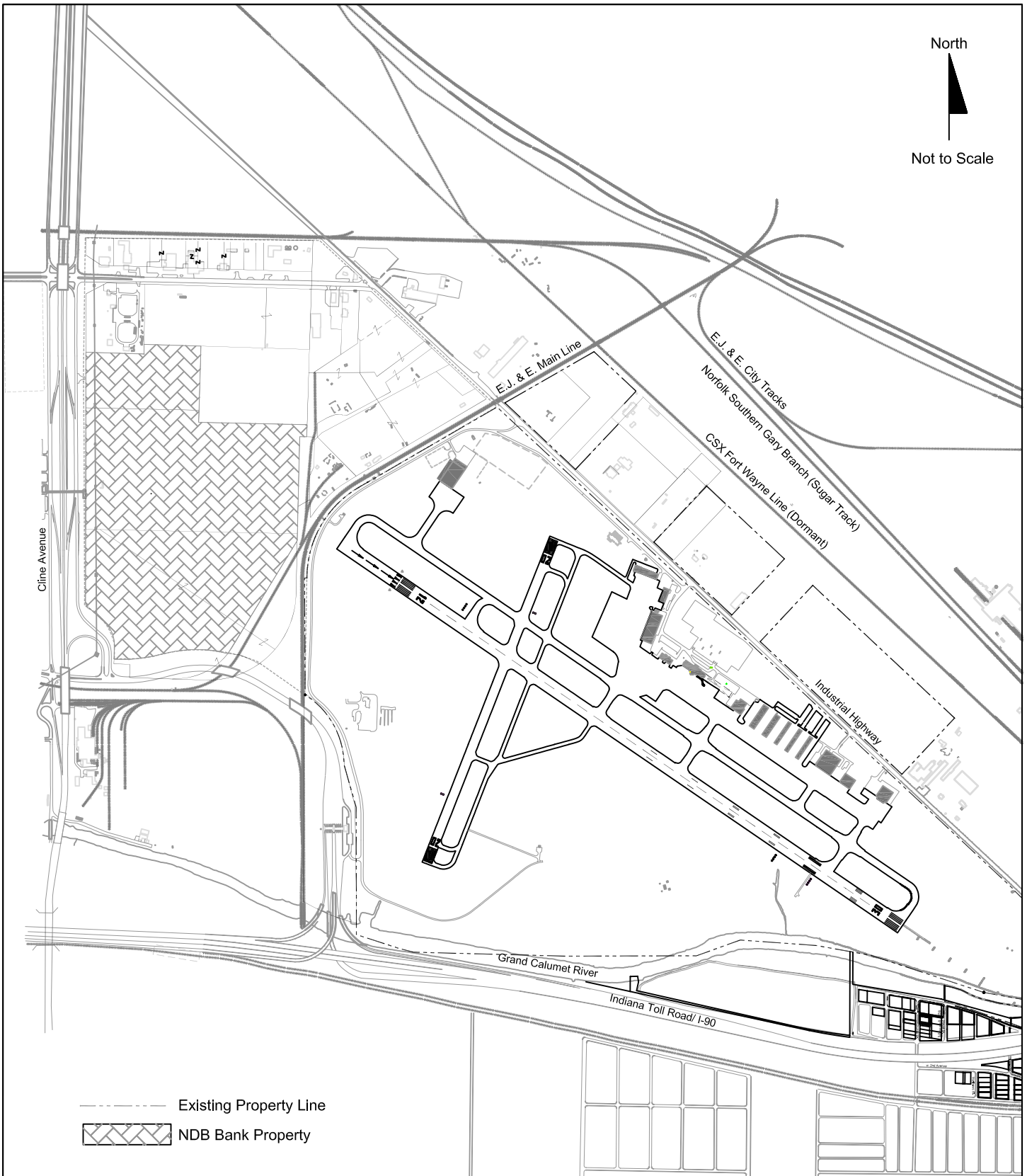
---

<sup>20</sup> Gary/Chicago Airport Authority, prepared by Clean World Engineering, Ltd. *Phase III Environmental Site Assessment, NBD Bank Trust Property Located Within the Runway Extension Zone Northwest of Gary/Chicago Airport, Gary, Indiana*. November 2003.

<sup>21</sup> Gary/Chicago Airport Authority, prepared by Clean World Engineering, Ltd. *Phase III Environmental Site Assessment, NBD Bank Trust Property Located Within the Runway Extension Zone Northwest of Gary/Chicago Airport, Gary, Indiana*. November 2003.



North  
  
 Not to Scale

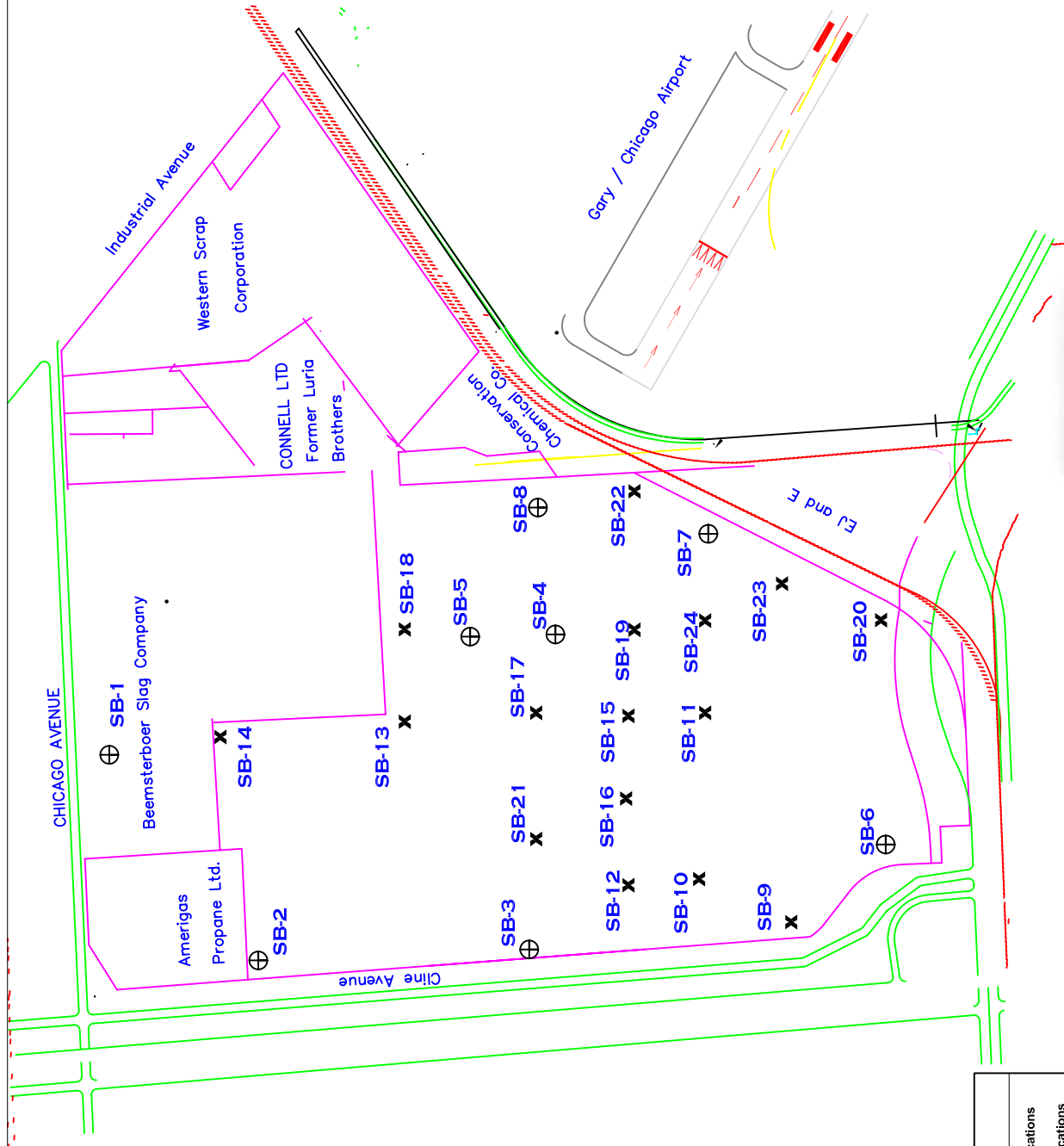
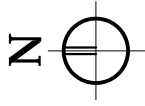


FILE NAME : D:\Gary\GIS\Exhibits\Chapter 5\con 5.19-1.dwg  
 : 28-MAR-04, 08:15:28 / JJ  
 WRD VNT



## EXHIBIT 5.19-1 NBD Bank Property

April 8, 2004



LEGEND	
⊕	Phase II Sampling Locations
×	Phase III Sampling Locations

Base map source: Property map (Exhibit "A" - Aerofintly)  
Gary/Chicago Airport  
Scale (approximate): 1" = 800'  
Source: Clean World Engineering



samples were collected from the eight boreholes for laboratory analyses, in addition to groundwater samples. Eight surface soil samples were analyzed for volatile organic compounds (SB-1-S through SB-8-S); eight subsurface soil samples were analyzed for VOCs, semi volatile organic compounds (SVOCs), PCPs and RCRA Toxicity Characteristic Leaching Procedure metals (SB-1-SS through SB-8-SS); soil sample analytical results were compared against the IDEM RISC guidelines for industrial land use; eight groundwater samples were analyzed for VOCs, SVOCs, PCBs, and total RCRA metals (SB-1-W through SB-8-W); and groundwater sample analytical results were compared against the IDEM RISC guidelines for industrial land use.<sup>22</sup>

Based upon the soil and groundwater sample results, the following conclusions and recommendations were made about the NBD Bank Trust Property conditions:

- Laboratory results confirmed that surfacial soil is contaminated. The polynuclear aromatic hydrocarbon (PNA) benzo(a)pyrene is surface soil samples SB-1-S and SB-4-S were detected above the IDEM RISC closure levels for industrial land use.
- The groundwater contamination from RCRA metals and benzene (SB-8) has been confirmed to exist at concentrations in excess of the IDEM RISC groundwater closure levels for residential land use.
- The presence of contaminants in the groundwater samples at the southern boundary of the Site and the assumed groundwater flow in the southern direction towards the Grand Calumet River indicated possible off-site migration of contaminants.<sup>23</sup>

#### **5.19.5.3 Phase III ESA for NBD Bank Site (Northwest Acquisition Area)**

In October 2003, a Phase III subsurface investigation at the NBD Bank Trust Property was conducted to determine the extent of groundwater contamination, and assist in the development of a Remedial Action Plan. During this investigation, 16 soil borings (SB-9 to SB-24) were installed using a direct push probe until groundwater was encountered. Continuous sampling was performed at 3-foot intervals. Surface samples from the eight boreholes (SB-9 to SB-16) and subsurface samples from 16 boreholes (SB-9 to SB-24) were collected for laboratory analyses, in addition to groundwater samples. The Grand Calumet River is one mile south of the NBD Bank Trust Property, flowing in the east-west direction. The surface relief is slight, probably no more than a few feet throughout the property. The groundwater table is flat. The upper sand unit is known as the Calumet Aquifer. The aquifer is unconfined and approximately 40 feet thick. The

---

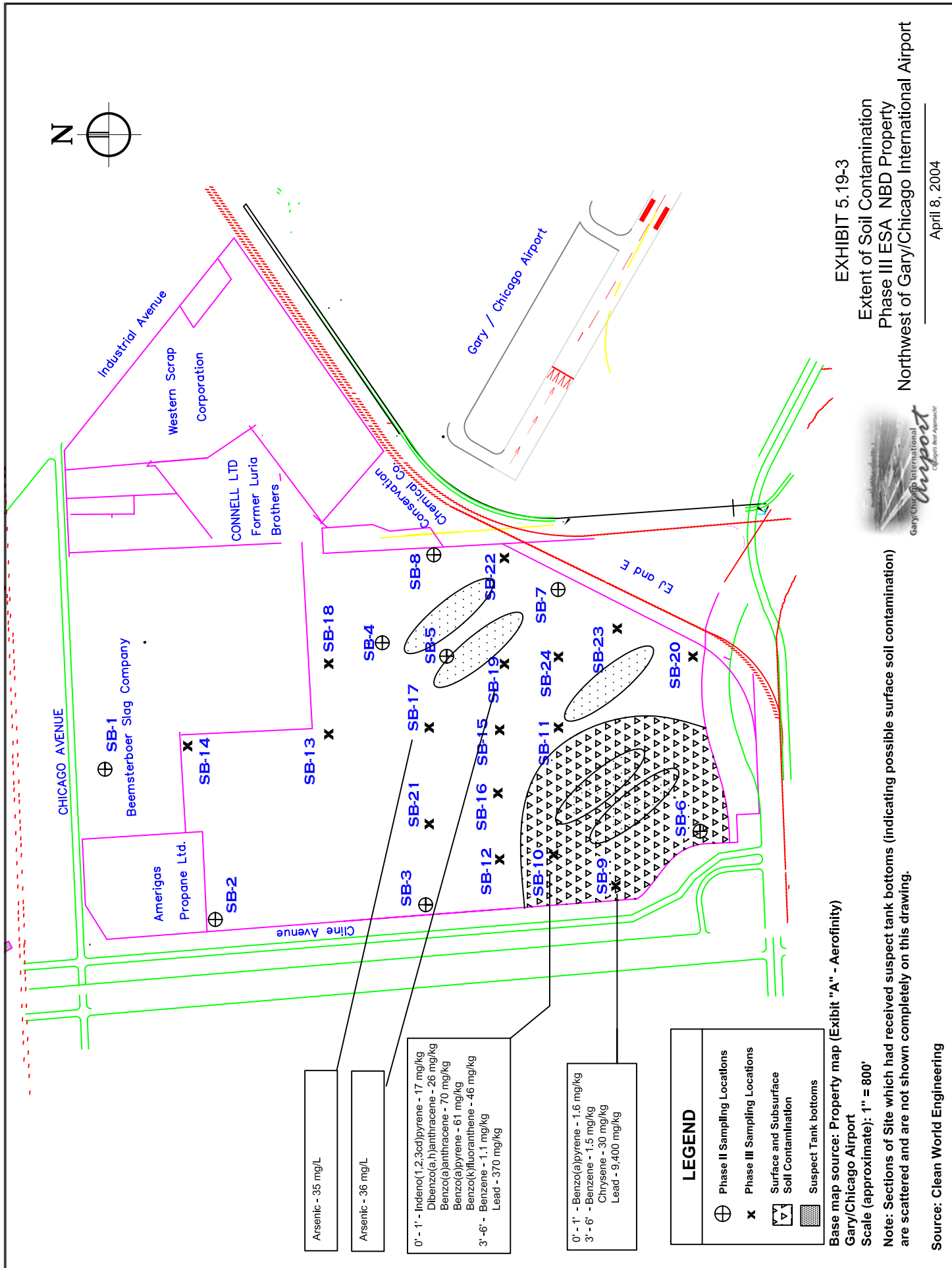
<sup>22</sup>Gary/Chicago Airport Authority, prepared by Clean World Engineering, Ltd. *Phase III Environmental Site Assessment, NBD Bank Trust Property Located Within the Runway Extension Zone Northwest of Gary/Chicago Airport, Gary, Indiana.* November 2003.

<sup>23</sup>Gary/Chicago Airport Authority, prepared by Clean World Engineering, Ltd. *Draft Phase II Environmental Site Assessment, NBD Bank Trust Property Located Within the Runway Extension Zone Northwest of Gary/Chicago Airport, Gary, Indiana.* February 2003.

Calumet Aquifer is assumed to be discharging groundwater into this local surface water body, specifically the Grand Calumet River. The following summarizes the findings:

### **Soil Conditions**

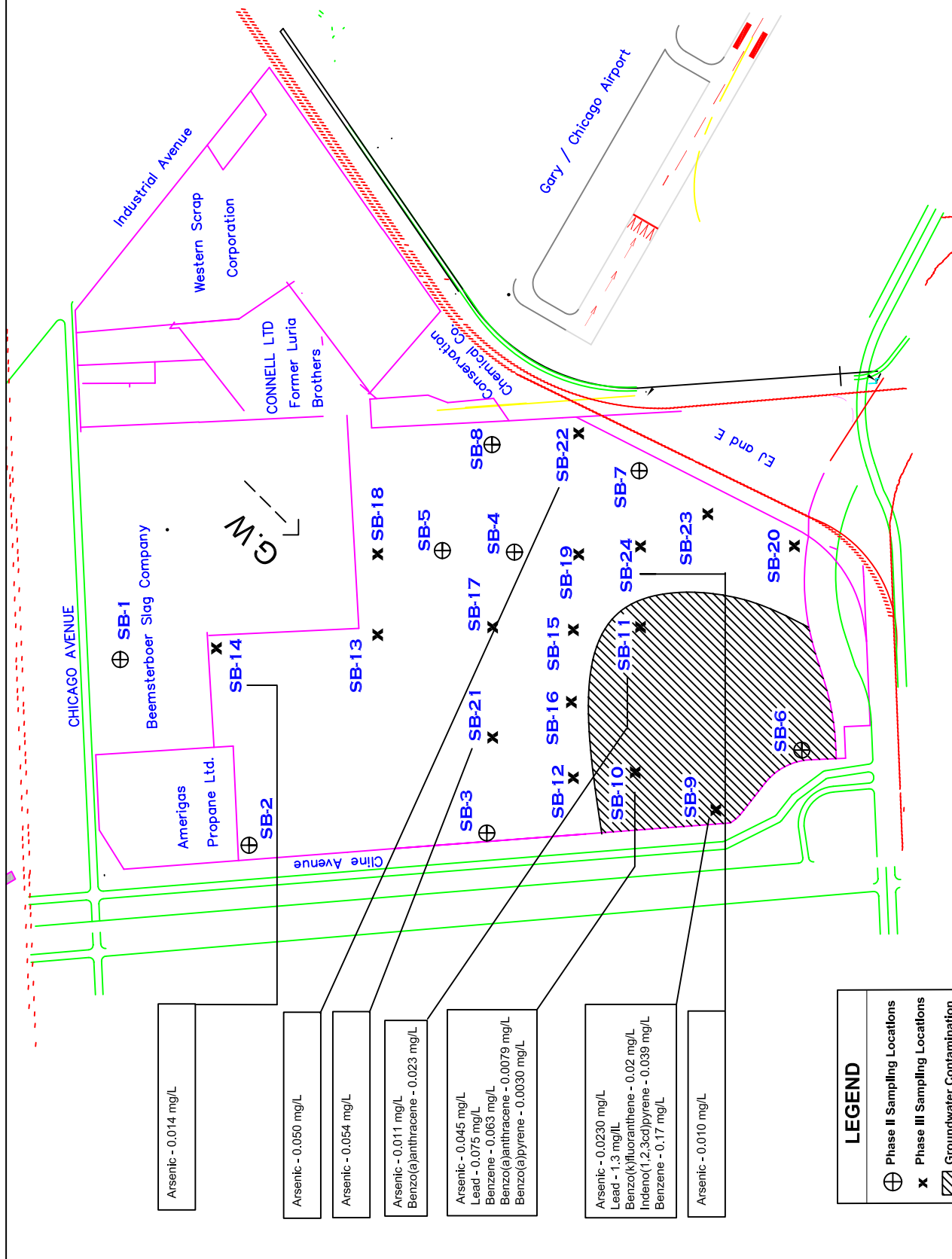
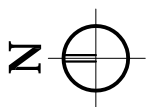
- Site surface soil is contaminated at the area of suspect tank bottoms, and at the southwest corner of the site (SB-9 and SB-10). The extent of subsurface soil contamination has been limited to the southwest portion (SB-9 and SB-10) of the NBD Bank Trust Property, as shown in **Exhibit 5.19-3**.
- The benzene concentrations for subsurface samples SB-9-SS and SB-10-SS exceeded the RISC migration to groundwater closure levels for industrial land use. Other VOCs in subsurface soil samples detected above the reporting limits were below the IDEM RISC industrial closure levels.
- The PNAs benzo(a)pyrene in surface soil sample SB-9-S, and benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3cd)pyrene in surface soil sample SB-10-S were detected above the IDEM RISC industrial direct contact level.
- Chrysene in subsurface soil sample SB-10-SS was detected above the IDEM RISC groundwater closure levels for industrial land use. Other PNA compounds in surface and subsurface soil samples detected above the reporting limits were below the IDEM RISC industrial closure levels.
- The RCRA metal lead in subsurface soil sample SB-9-SS and SB-10-SS; and arsenic in subsurface soil samples SB-17-SS and SB-19-SS were detected above the IDEM RISC industrial migration to groundwater level. Other RCRA metals in subsurface soil samples detected above the reporting limits were below the IDEM RISC industrial closure levels.
- Spatial distribution of concentrations for RCRA metals did not define a meaningful plume. Due to the highly permeable nature of the sandy and shallow groundwater table, the contaminants suspected from former usage of the site may have likely migrated into the saturated zone. As the NBD Bank Trust Property is not surrounded by a fence or otherwise secured, the potential for human exposure to contaminants from surface and subsurface soil exists.
- For the eight surface soil samples (SB-9-S through SB-16-S) analyzed, the VOC concentrations detected above the laboratory-reporting limits were below the IDEM RISC industrial–direct contact level.



- The site geology based on the boring logs consists of vegetative growth that overlies approximately six feet of fine to medium sand.

#### **Groundwater Conditions**

- Groundwater beneath the NBD Bank Trust Property has possibly been impacted from both on and off-site sources. Groundwater is contaminated in the southwest portion of the NBD Bank Trust Property (SB-9, SB-10, and SB-11). The extent of groundwater contamination has been limited to the southwest portion of the NBD Bank Trust Property, as shown on **Exhibit 5.19-4**.
- The VOC benzene in groundwater sample SB-9-W was detected above the IDEM RISC groundwater closure level for residential and industrial land use. VOC benzene in groundwater sample SB-10-W was detected above the IDEM RISC groundwater closure level for residential land use. Other VOCs in groundwater samples detected above the laboratory-reporting limits were all below the IDEM RISC groundwater closure level for residential land use.
- The PNAs indeno(1,2,3cd)pyrene in groundwater sample SB-9-W; benzo(a)anthracene in groundwater samples SB-10-W and SB-11-W; and benzo(a)pyrene in ground sample SB-10-W were detected above the IDEM RISC closure levels for residential and industrial land use. The PNA benzo(k)fluoranthene in groundwater sample SB-9-W was detected above the IDEM RISC closure level for residential land use. Other PNAs in groundwater samples detected above the laboratory-reporting limits were all below the IDEM RISC groundwater closure level for residential land use.
- The RCRA metals arsenic in groundwater samples SB-9-W through SB-11-W, SB-13-W, SB-14-W, SB-17-W, SB-21-W, SB-22-W and SB-24-W; and lead in groundwater samples SB-9-W, SB-10-W and SB-13-W were detected above IDEM RISC closure levels for residential and industrial land use. Other RCRA metals in groundwater samples detected above the laboratory-reporting limits were all below the IDEM RISC groundwater closure level for residential land use.
- Spatial distribution of concentrations for RCRA metals did not define a meaningful plume. The presence of contaminants at the southwest boundary groundwater samples (SB-9 and SB-10) and groundwater flow in a southwest direction towards the Grand Calumet River indicates possible off-site migration of contaminants. As the perennial body of water, the Grand Calumet River is considered to have direct contact with the NBD Bank Trust Property; therefore, the surface water pathway is complete. There is no residential



## EXHIBIT 5.19-4

Extent of Groundwater Contamination  
NBD Property  
Northwest of Gary/Chicago International Airport



April 8, 2004

Base map source: Property map (Exhibit "A" - Aerofinity)  
Gary/Chicago Airport  
Scale (approximate): 1" = 800'  
Source: Clean World Engineering

housing between the NBD Bank Trust Property and the Grand Calumet River. The surficial aquifer is not used as a source of drinking water by the residents. However, there is no groundwater restriction by the City of Gary prohibiting the use of groundwater as a source of drinking water.<sup>24</sup>

#### **5.19.5.3 Phase I ESA for Southeast Acquisition Area**

For the properties located in the southeast portion, the ESA did not reveal any RECs in connection with the residences to be acquired due to their proximity to the Runway Protection Zone for Runway 30. Asbestos-containing materials (ACMs) and lead-based paint (LBP) could be present based on the age of the homes. These should be considered during residential demolitions.

Several 55-gallon drums and an AST were observed at the equipment storage facility, NG Land Ltd., which could be a potential REC.<sup>25</sup>

#### **5.19.6 Mitigation**

The following recommendations have been made in regard to cleanup actions that should occur at the time of the Proposed Action:

##### **Additional Phase II Procedures**

At the time of acquisition of parcels where RECs were identified but permission was not granted for the access needed to complete a Phase II, additional Phase II/III procedures should be conducted as required to either document that the site will not require cleanup or to prepare a Remediation Action Plan (RAP). These parcels can be divided into three groups:

- Parcels located northwest of the runway that are located within the construction limits for the runway improvements and expansion actions, and will be disturbed. These parcels include the railway right-of-way and three other parcels. Phase II/III activities will be pursued immediately.
- Parcels located northwest of the runway that are needed to assemble land for the long-term passenger terminal area. The Phase II/III procedures will be conducted as a part of the acquisition process, with cleanup to occur prior to development activities.

---

<sup>24</sup> Gary/Chicago Airport Authority, prepared by Clean World Engineering, Ltd. *Phase III Environmental Site Assessment, NBD Bank Trust Property Located Within the Runway Extension Zone Northwest of Gary/Chicago Airport, Gary, Indiana*. November 2003.

<sup>25</sup> Gary/Chicago Airport Authority, prepared by Clean World Engineering, Ltd. *Draft Phase I Environmental Site Assessment of Properties Located within the Runway Protection Zone Southeast of Gary/Chicago Airport, Gary, Indiana*. October 2002.



### **Submittal of Remediation Action Plan**

A conceptual remediation plan has been developed as a part of the preparation of the EIS. A Remediation Action Plan (RAP) will be submitted for approval once the Proposed Action is imminent so that the cleanup activities can occur immediately upon the acceptance of the RAP.

### **Soil Mitigation Actions**

Benzo(a)pyrene concentration in surface soil samples SB1, SB4, and SB9 has been detected above the RISC closure level for industrial land use. Although land farming has been carried on for major hazardous components, some remedial actions are still required. The remaining thick and black suspect tank bottoms should be scraped and removed from the area. The abandoned drums should also be removed and disposed in an environmentally acceptable manner. Excavation and disposal or land farming are considered viable alternatives. The soil excavated will either be land farmed or, where necessary, disposed of at a licensed hazardous waste disposal facility. Moreover, considering the site geologic characteristics and the portion of this area is directly in the path of the runway extension and location for FAA navigational equipment, it is the opinion of the environmental consultants, Clean World Engineering, Ltd. (CWE), that the unconsolidated solid material will need to be removed, at least to a certain depth, and replaced with clean fill to provide adequate soil mechanical properties as part of the future use of the property.<sup>26</sup> The areas which will be serviced by FAA personnel in the future should be cleaned to above closure level for residential land use.

- An additional subsurface investigation should be performed at the properties (Western Scrap Corporation) northeast of the NBD Bank Trust Property (up-gradient) to assess the background levels of contaminants in soil and groundwater.
- Although land farming has been carried out for major hazardous components, some remedial action is still required for surfacial contamination. The thick and black oily sludge should be scrubbed and removed from the NBD Bank Trust Property.
- The drums at the NBD Bank Trust Property should also be removed and disposed of in an environmentally acceptable manner.
- Excavation and disposal or land farming are considered the viable methods of soil remediation. Moreover, considering that the NBD Bank Trust Property geologic characteristics, the portion of the property within the construction limits will require removal at least to a certain depth and replacement with clean fill to provide adequate soil mechanical properties.
- The NBD Bank Trust Property should be fenced or properly secured to prevent exposure to the general public and illegal dumping.

### **Groundwater Mitigation Actions**

---

<sup>26</sup> Gary/Chicago Airport Authority, prepared by Clean World Engineering, Ltd. *Conceptual Remediation Plan NBD Bank Trust Property Located within the Runway Extension Zone Northwest of Gary/Chicago Airport, Gary, Indiana*, November 2003.

Based on the existing site conditions and laboratory data, the NBD Bank Trust Property is contaminated with metals and organic compounds. The concentrations of organic compounds and heavy metals in the groundwater exceeded the IDEM RISC closure levels for residential land use. Concentrations of some organic compounds and heavy metals have exceeded the IDEM RISC closure levels for industrial land use. The presence of contaminants in the groundwater samples at the boundary of the property downstream indicates the contaminants may have migrated off-site.<sup>27</sup>

- Groundwater sampling should be performed at the monitoring well at the Conservation Chemical Company property. The sampling will assess the progress of remedial action for the extraction of free product being conducted by U.S. EPA Region 5 at the Conservation Chemical Company property.
- The implementation of groundwater treatment system using six extraction wells at the Conservation Chemical Company Site will prevent the offsite migration of contamination into the NBD Bank Trust Property. Furthermore, the placement of the sixth extraction well at the EJ&E Railway right-of-way has a zone of influence over the eastern boundary of the site.
- Implementation of a treatment system such as hydraulic barriers will prevent further migration of contaminated groundwater offsite toward the Grand Calumet River.
- The Remedial Action Plan for the site should be submitted to IDEM to reduce the contaminants at the NBD Bank Trust Property and to prevent offsite migration of the groundwater.

Groundwater remediation will be accomplished with 8-10 vertical extraction wells. Extraction wells of 6 inches in diameter will be installed at the southern boundary of the property using conventional techniques. Pneumatic, submersible, ejector pumps will be installed inside the extraction wells. The aboveground treatment system for extracted groundwater, such as activated carbon of sufficient size, should work to process the volume of water extracted.

Disposition of treated groundwater will depend on the cost. Re-injection is an option and it makes good technical sense without causing adverse impact on the receiving groundwater table at the site. Groundwater treatment at the site can be combined with the ongoing treatment process at the adjoining properties. Groundwater remediation at the adjoining Conservation Chemical Company site has been implemented using six extraction wells and an infiltration gallery. In addition, groundwater remediation utilizing a groundwater extraction and treatment system has been ongoing at the Midco II located

---

<sup>27</sup> Gary/Chicago Airport Authority, prepared by Clean World Engineering, Ltd. *Conceptual Remediation Plan NBD Bank Trust Property Located within the Runway Extension Zone Northwest of Gary/Chicago Airport, Gary, Indiana*, November 2003.

northwest across the Gary/Chicago International Airport. The treated water is being transported to the Midco I site located at 15<sup>th</sup> Street in Gary, where it is pumped into a deep injection well.<sup>28</sup>

The pump and treat system for this particular application will have the following characteristics:

- Each extraction well will consist of pre-packed well screens, casing, risers, pneumatic pumps and well vault.
- An oil-water separator will be used to separate any oil from groundwater extraction wells.
- HSA will be employed to drill the boring.
- Piezometers will be installed around the site to permit evaluation of the extent of the capture.
- A groundwater treatment system using granular activated carbon unit will be installed after conducting pilot studies.

Off-site migration of contaminated groundwater has been identified as an important factor; therefore, control of soil water movement will be implemented unless it can be confirmed that no new contaminants are being introduced within the up-gradient watershed boundary. Although physical barriers like low permeability barrier (slurry wall) or hydraulic barriers (pumping system) have been considered to prevent off-site migration of containment plumes and remove or separate contaminants from the media, these measures will only be used if absolutely necessary to meet the cleanup objectives established for the NBD Bank Trust Property.

As needed, permits for installation, operation and maintenance of the remedial system will be obtained. Before any groundwater extraction work the existence and location of underground utility lines will be determined and, during the extraction process, they will be rerouted temporarily or permanently if necessary.

#### **Verification of Completion of Remediation**

A media sampling plan will be implemented to verify completion of remediation. Following the completion of groundwater extraction activities, groundwater samples will be collected in the locations previously sampled. Additional groundwater samples will be collected from the locations south of the NBD Bank Trust Property if off-site access is obtained.<sup>29</sup>

---

<sup>28</sup> Gary/Chicago Airport Authority, prepared by Clean World Engineering, Ltd. *Conceptual Remediation Plan NBD Bank Trust Property Located within the Runway Extension Zone Northwest of Gary/Chicago Airport*, Gary, Indiana, November 2003.

<sup>29</sup> Gary/Chicago Airport Authority, prepared by Clean World Engineering, Ltd. *Conceptual Remediation Plan NBD Bank Trust Property Located within the Runway Extension Zone Northwest of Gary/Chicago Airport*, Gary, Indiana, November 2003.

Following the collection of confirmatory groundwater samples the site data will be evaluated using IDEM RISC closure values to assess the site status regarding additional remediation closure.